

Form PTO-1449

ATTY DOCKET NO. 97-99E

SERIAL NO. 10/738,454

FILING DATE: December 16, 2003

APPLICANT: Wittrup et al.

GROUP: 1645 1636

U.S. PATENT DOCUMENTS

Exmr. Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
JR	5,348,867	9/20/94	Georgiou et al.	435	69.7	
JZ	5,871,907	2/16/99	Winter et al.	436	6	
OT	6,300,065	10/9/01	Kieke et al.	435	6	
JT	6,423,538	7/23/02	Wittrup et al.	435	320.1	
JT	6,696,251	2/24/04	Wittrup et al.	435	6	
JZ	6,699,658	3/2/04	Wittrup et al.	435	6	

FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Subclass	Translation Yes/No
JR	WO 01/48145	7/5/01	WO PCT			
JT	WO 99/36569	07/22/99	WO PCT			
JT	EP 00673427	9/27/95	EPO			
JZ	EP 00682710	11/22/95	EPO			

NON-PATENT LITERATURE DOCUMENTS

JR		Hoogenboom, H.R., "Designing and optimizing library selection strategies for generating high-affinity antibodies," Tibtech 15:62-70, 1997
OT		Kipriyanov, S. M., et al., "Two amino acid mutations in an anti-human CD3 single chain Fv antibody fragment that affect the yield on bacterial secretion but not the affinity," Protein Eng. 10(4):445-453, April 1997
JT		Kowalski, J.M., et al., "Secretion efficiency in Saccharomyces cerevisiae of bovine pancreatic trypsin inhibitor mutants lacking disulfide bonds is correlated with thermodynamic stability," Biochemistry 37:1264-1273, February 3, 1998
JT		Marks, J. D. et al., "Molecular evolution of proteins on filamentous phage," J. Biol. Chem. 267(23):16007-16010, 1992
JT		Martineau, P. et al., "Expression of an antibody fragment at high levels in the bacterial cytoplasm," J. Mol. Biol. 3:117-127, 1998
JZ		Moosmayer, D. et al., "A single-chain TNF receptor antagonist is an effective inhibitor of TNF mediated cytotoxicity," Therapeutic Immunology 2:31-40, 1995

EXAMINER

David Sugo

DATE CONSIDERED

8/3/05

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ATTY DOCKET NO. 97-99E			SERIAL NO. 10/738,454		FILING DATE December 16, 2003		
APPLICANT Wittrup et al.				GROUP <u>1645</u> <u>1236</u>			

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U.S. PATENT DOCUMENTS

Exmr Initial		Document Number	Date (dd-mm-yyyy)	Name	Class	Subclass	Filing Date if Appropriate
<i>DR</i>	1	5,861,156	01/19/1999	George et al.	424	135.1	

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes/No

OTHER PRIOR ART (including Author, Title, Date, Pertinent Pages, etc.)

<i>DR</i>	2	Weidanz, Jon A. et al. (August 1998) "Display of functional $\alpha\beta$ single-chain T-cell receptor molecules on the surface of bacteriophage" <i>Journal of Immunological Methods</i> 221:59-76.
<i>DR</i>	3	Shusta, E.V. et al. (1999) "Yeast Polypeptide Fusion Surface Display Levels Predict Thermal Stability and Soluble Secretion Efficiency" <i>Academic Press</i> 292:949-956.
<i>DR</i>	4	Lake, D.F. et al. (January 1999) "Construction and binding analysis of recombinant single-chain TCR derived from tumor-infiltrating lymphocytes and a cytotoxic T lymphocyte clone directed against MAGE-1" <i>International Immunology</i> 11:745-751.
<i>DR</i>	5	Kumar, V. et al. (1997) "Recombinant T Cell Receptor Molecules Can Prevent and Reverse Experimental Autoimmune Encephalomyelitis" <i>The Journal of Immunology</i> 159:5150-5156.

EXAMINER <i>David Mayo</i>	DATE CONSIDERED <i>8/3/05</i>
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APPLICANT Wittup et al.		GROUP 1645 / 636

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Exmr. Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
JZ	4,946,778	08/07/90	Ladner et al.	435	69.6	
	5,013,650	05/07/91	Carty	435	69.1	
	5,223,409	06/29/93	Ladner et al.	435	69.7	
	5,225,539	07/06/93	Winter			
	5,258,289	11/02/93	Davis			
	5,258,498	11/02/93	Huston et al.	530	350	
	5,260,203	11/09/93	Ladner et al.	435	172.3	
	5,316,922	05/31/94	Brown			
	5,403,484	04/04/95	Ladner et al.	435	236.1	
	5,411,873	05/02/95	Adams			
	5,427,908	06/27/95	Dower			
	5,482,858	01/09/96	Huston et al.	435	252.3	
	5,510,240	04/23/96	Lam			
	5,571,698	11/05/96	Ladner			
	5,580,717	01/20/95	Dower			
	5,624,817	04/29/97	Miller et al.	435	69.1	
	5,723,286	03/03/98	Dower et al.	435	5	
	5,723,323	03/03/98	Kauffman et al.	435	172.3	
	5,733,743	03/31/98	Johnson et al.	435	69.1	
	5,763,192	06/09/98	Kauffman et al.	435	7.1	
	5,780,225	07/14/98	Wigler et al.	435	6	
	5,814,476	09/29/98	Kauffman et al.	435	69.1	
JZ	5,817,483	10/06/98	Kauffman et al.	435	69.1	
JZ	5,824,514	10/20/98	Kauffman et al.	435	91.1	

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92	5,837,500	11/17/98	Ladner et al.	435	69.7	
01	5,858,657	01/12/99	Winter et al.	435	6	
91	5,866,344	02/02/99	Georgiou	435	7.21	
91	5,871,974	02/16/99	Huse	435	69.7	
91	5,900,476	05/04/99	Ruggeri et al.	530	380	
01	6,027,910	02/22/00	Klis et al.	435	41	
02	6,114,147	09/05/00	Frenken et al.	435	69.7	

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		Document Number	Date	Country	Class	Subclass	Translation Yes/No
91		WO94/18330	08/18/94	PCT			
01		WO94/01567	20.01.94	PCT			
01		WO98/49286	05.11.98	PCT			
01		0 436 597 B1	02.04.97	EP			

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91		Alam et al., (June 1996), "T-cell-receptor Affinity and Thymocyte Positive Selection," <i>Nature</i> 381:616-620
01		Anand, R. et al. (1992), "Progress in developing methylotrophic yeasts as expression systems," <i>TIBTECH</i> 10:413-417
91		Bentley, G.A. and Mariuzza, R.A., (1996), "The Structure of the T Cell Antigen Receptor," <i>Annu. Rev. Immunol.</i> 14:563-590
91		Boder E.T. and Wittrup, K.D. (1997), "Yeast surface display for screening combinatorial polypeptide libraries," <i>Nature Biotechnol.</i> 15:553-557
01		Boder, E.T. and Wittrup, K.D. (1995), "A Yeast Surface Display System for <i>in vitro</i> Affinity Maturation of Antibodies," <i>Protein Interactions</i> , June 1-4, 1995, Beckman Institute, University of Illinois, Urbana, (Abstract Only)
02		Buckholz, R.G. and Gleeson, M.A.G. (1991), "Yeast Systems for the Commercial Production of Heterologous Proteins," <i>Bio/Technol.</i> 9:1067-1072

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<i>OZ</i>		Bjorkman, P.J., (Apr 1997), "MHC Restriction in Three Dimensions: A View of T Cell Receptor/Ligand Interactions," <i>Cell</i> 89:167-170
		Clackson et al., (Aug 1991), "Making Antibody Fragments Using Phage Display Libraries," <i>Nature</i> 352:624-628
		Cregg, J.M. et al. (1993), "Recent Advances in the Expression of Foreign Genes in <i>Pichia pastoris</i> ," <i>Bio/Technol.</i> 11:905-910
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J		Matsui et al., (Dec 1991), "Low Affinity Interaction of Peptide-MHC Complexes with T Cell Receptors," <i>Science</i> 254:1788-1791
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JR		Ulrich et al. (Dec 1995), "Expression Studies of Catalytic Antibodies," <i>Proceed. Natl. Acad. Sci.</i> 92:11907-11911
OI		van der Vaart (Sept 1965), "[Identification and Characterization of Cell Wall Proteins of <i>Saccharomyces cerevisiae</i> ," Thesis, ISBN 90-393-1498-5 pp.1-138
JP		Weber et al., (Apr 1992), "Specific Low-affinity Recognition of Major Histocompatibility Complex Plus Peptide by Soluble T-cell Receptor," <i>Nature</i> 356:793-796
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<i>Dave J. Yuzo</i>	8/3/05	

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Substitute for form 1449/PTO, based on PTO/SB/08A and 08B		Application Number	10/738,454
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Filing Date	December 16, 2003
		First Named Inventor	Wittrup et al.
		Art Unit	1636
		Examiner Name	David Guzo
		Attorney Docket Number	97-99E

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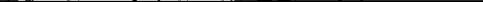
U.S. PATENT DOCUMENTS

Examiner Initial*	Cite No. ¹	Document Number (US-)	Publication Date (MM-DD-YYYY)	Name	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear (or entire document unless noted otherwise)
JR	5,614,384	03/25/1997	Kniskern et al.		

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Examiner Initial*	Cite No. ¹	Foreign Patent Document Number (include WIPO country code)	Publication Date (MM-DD-YYYY)	Name	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear (or entire document unless noted otherwise)	T 2

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